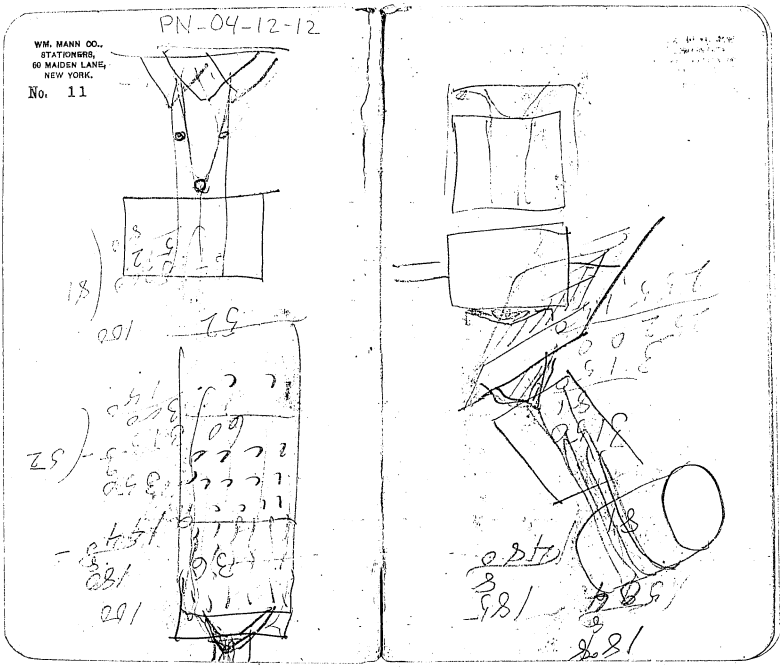
Notebook, PN-04-12-27

This pocket notebook was used by Edison during the period December 1904-March 1905. It contains notes and drawings pertaining to experimental work to be performed and reminders about business and legal matters. Many of the proposed experiments relate to the chemical composition of components for storage batteries and to the construction of groups of test cells. Included are tests regarding the charge and discharge of Edison and Gibbs cells, as well as experiments with nickel flake electrodes. Also included are notes relating to patent questions for Frank L. Dyer; business matters to discuss with William E. Gilmore; a plant operations matter for Emil Herter at the Edison Portland Cement Co. works; and questions about graphite for Edward G. Acheson. The undated entries at the beginning of the book may have been made at the Edison Portland Cement Co. works in Stewartsville, New Jersey. Among the employees mentioned in relation to individual experiments are Jonas W. Aylsworth, Robert A. Bachman, John F. Ott, and O. A. Rogers. The pages are unnumbered. Approximately 70 pages have been used.

PN-04-12-12

WM. MANN CO.,
STATIONERS,
60 MAIDEN LANE,
NEW YORK.

No. 11



Must have proration
radius [illegible] ground
[illegible] Chassis
[illegible] for Motors

Not spring enough for
Trucks [illegible]
[illegible]
Noise players

Blower in Dryer No
Oiling device

Gear Casing Vibrates
too much - too
much noise
Rotten — Motor too big
[illegible]

Dust chamber Water
driving 101 should have
outside air of possible -
or Ventilator put in
somehow

Fan Water on fan at
Dryer gives sudden
thump, do not due
to any belt slipping
but some obstacle
or gear clashing

How about the hole in end of Motor where chain is — notice fan at dryer has hole open No 101 Motor is closed by Rubber to the fan Ventilator When none is used should be closed permanently & when Ventilator is should be pked open —

Slowing down box is no good except for a block etc anything else shut down —

Square Cotton to 1" Screen hole at Dryer if we make it

E

Instability current now about a case when you throw fields over to light line & you find that open = Why not weaken power generator field

Send Dryer pyrometer back for calibration

Send to Lab for Bag Hq Thermometer

Guage guard over fans
on armature –

Turned for air for
extension on frame and Motor
wood

How are fan shields
on motors locked

Dec 27 1904 – Bat

a + b Ferric hydroxides / Ferric Chloride should be out a hydroxide best not b – The a oxides in Ferric Cl are precip by adding Na Sulphate or Sul acid –

a is obtained by precip Ferric Cl by calculation b is obtained by oxidn of Ferrous hydrate, Ferrous Ferric or Ferrous Carb –

Spec g a 5.11 b 3.95 –

Can detect Hemp in KOH by Evap Lower + dissolving in alcohol –

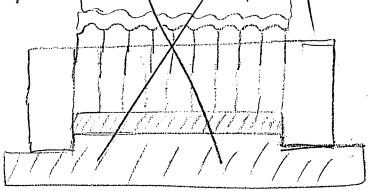
Put some Cups in 21% alcs CP Medical ships Also. Cold – another bottle 21% warm – another bottle put iron, another bottle put Cups plated 1000 more – another bottle, put Reg Cups + Rubber Warm – date them –

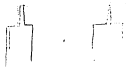
Put a large bottle with 100 Cups in 33% warm for future Experiment

DEC 27 1898 ordered made

J. Lu make Sectional Corrugating disc
7½ Corr to inch —

OK McKay





Spoke to Johnson + Webster about them
Johnson going over piece with foreman
Always Cut —

Looking discarded Aluminum
grids see if much come out

Take cups from 33% heat, wash chilled
1½ O. then heat alcohol test without alcohol
lime —

Moor, Wolke [illegible] stains + gave brown fuchsine + Mitter [illegible].

group green Mt Ot, no graf 3:2 after pressing soak green alcohol 24 hours dry 3 hours

group as above but put in 33% 48 hours then water 50 hours, change water 2 or 3 times, then dry 6 hours hot plate, then soak alcohol 24 hours dry 3 hours

Soak CP graphite in water quite a while acc of puffs when put in flame –

Acc of 8 hours ~~[illegible]~~ gas into Aluminum & 2 Phosphate + dilte H_2O_2

Dissolve some raw graphite in NH_4Cl + NH_4OH acc of any reaction –

(try 33% Carps soaked long time) in alcohol acc of lime sente comes off – dilte Bengal – ~~[illegible]~~ appear go off some –

Try Iodate K with neutral Aluminum

Group 3 Carps & 2 Carps & gas in 33% –

Dec 28 1904

Fry group with 2% KOH
" 1½% NaOH
This week determine relative
Conductivity ditto Double
above amounts –

qtz and Molecular proportions

group with ½% ferric hydrox
200 mlg each cell –

ditto ferric hydrox
200 mlgms –

Charged this soaked 21%
1 gram to 100cc KCy
Soak 10 minutes –

Old 26 – in 21% with
100 mlg KCy –

group - 500 mlg Aluminum
& 2 grams Fluoride K
Each cell -

See if there was 2 grams
Fluoride in presence least
per cell or the whole -

Run old Aluminum in
fresh KOH, see if recovered

See about throwing up some
iron cells, some sizes no little
bottle & plating them - also
work up a copper grid -

Look at sulphuric acid H_2O_2 don't
probably H_2O to crystal & attack
in grids, with KOH

Group 250 mlg Al -
2 grams Silicate Soda

~~See if Silicate Soda pp~~
~~aluminum — NO~~

~~Group charged 9 cells~~
~~with 100 KCy mlg~~
~~Each cell,~~

~~Group 1 gram KCy Each~~
~~cell — then put KIOH~~
~~after 1st discharge —~~

~~detto with 1 gram $CaCO_3$~~
~~+ 1 gram KCy — ~~
~~KOH after 1st charge —~~

~~Remove after soaking + drying group good bad by aluminum put in new pockets + good 21 p~~
~~see if its conducts —~~

group with Benzylene Lacquer
on inside 2 coats —
to keep off dissolving glass
Try Reg Group —
Test Lacq for aluminum —
Edison test lac by burning
see what it is —

ask gwa if some cells have
sulphates ~~can't~~ it Evaluation
of lack Ba in KOH.

gwa make some CP Rubber
& Asphalt Varnish for
inside endurance cells —

~~Group with Benzylene~~
Gibb also asked in 5th
Gordene also silicon varnish
NG

~~Put in glass tube about 25 new sheet cut soap bars in 21% ditto. and blow tube cold soap draw glass to fine point set aside with date~~

ditto Cups — 21%

ditto Reg M 5 in group set away for 3 months
21% do 12½ NaOH for metal

Consult Hodges & Rogers
race if its possible to
make a 4 to 4½/1000
M Cup — plate 7½/1000
making bubbly [illegible] 1½/1000 —

Phtalic acid — group

Try frothing with 12½%
Na OH from metal –

Mercury Diphenyl –

HgO HgCy2 Oxycyanide –
K Picric –

Sodium Metaantimoniate –
only known usual Na salt,
its slightly sol – Try for Al –

Try Na or K Hypophosphite

Hurry up Bachman on
Mounted for little nickel
jars – Hurry John
Jones Castings Grip Mounted
also make Mder Sylid
with 1/12 draft –

Be sure soaks remove a
bad aluminum & put new
Cup =
also see about KCy in a
bad aluminum

Change 9 hrs & start
new 16 oz - 20 00.

Follow up the HON pyropion
72 —
also the single over
with Hg only in Saluhum
as Cyanamide

Try Single over Mon Hg Fran
with Fare Chl see if
does stops and any thing
precipitate by Na Sulphide

See Jos OH & H mistakes
in numbering days 5000
Cups with aluminum

Take 5 chgd Gals
heat half alcohol —

Try $ZnCl_2$ in alcohol it dissolves

$2NH_4Cl\ ZnCl_2$ - double chl
used for absorbing oxides
Zn Fe or Cu - for soldering
use Conc Sol —

There is a neutral chl Zn

Prolochl Tin Sol dissolved

$SnCl_2$ forms Double Salts
Keep from air = forms Double
Salt with NH_4Cl Ba Sr Ca

Neutral + acid Tartrate Potash
dissolves alumina

Try Tartaric a + etc Salts
again

Tartrate of K · reduces Lithium & dissolves a number of oxides forming double salts —

Rochelle salt, K Na Tartrate.

Record Aluminate Letter on Al_2O_3 2lo in Rubber MIX ETC —

K Nitrite — forms double salts ~~Double~~ Double salts with water

Alcoholic Potash Hot

Ferric Nitrate, dissolves Ferric OH, great many properties, all sol Water —

ditto Mercuric Nitrate

Monday with phosphate salts with Fe. + also Aluminum - perhaps Al will not be used in presence of phos K try group

Gwa - see if Fe dissolves in presence of KI in KOH, ditto NH_4OH, or of Combines with H_2O_2)

See how Fe behaves getting rid of

Acid K Sulphate,

Acid Oxalate —

Group dropped 1 min in Conc Sol NH_4 in Nitly NH_4Cl dry to drive NH_4 off then drop 10 sec + dry between Each drop several times —

Make another Sol NH_4 & NH_4Cl_3
& do same thing this is
better as whole will go off
by heat, make group
also Evap some of Solution
in watch glass see how it
dries -

Are those Eyfet pockets
Nickel plated if not
send to Pharmacists

Try Benzol, Alcohol,
CS on little bottles
graphite also CP graph
see if anything dissolves
out on Evaporation

Soak 50 grubs in bottle
till no KOH by litmus
then make groups
as Experts show

Get fululong no asphalt
also Rosin in Kerosene
also proper Solvent B.G.

See The 10% KOH No 2
Grg Cell Endurance

Try 500 mg Al in NaOH
12½% & one 6½%
ditto 500 mg Al in
KOH, 10%

Treat a Reg group after
1 run + (a soak to get KOH out)
with Chlorosuma + DH, to lock the
particles together electrically
also after 1½ day Runs,
Just get KOH out —
also gets 5 hrs,
ditto do this w changed plates

See if its possible to dissolve Ni in NH_4 without a NH_4 Salt, also if not possible the minimum quantity of the NH_4 salt to get strong solution - Its OK subsolute CP Ni NH_4 - for the NH_4 $NHCl$ also Ag in NH_4 =

Also Run 3 times a Reg group - Soak out all the KOH, then treat with the NH_4 Ni solution, then dry & put in KOH, take out & dry, hard & then Soak KOH, potassium & then Run Reg -

Run one of the Molasses say 5 after 4 taking Calk with 1% KOH, then ~~Run~~ Run 3 or 4 times changing KOH, then soak water & get KOH & work with the Nickel ammo solution

Mn_2O_3 dec in Mtly without aid of Mtly salt, OK

Permanganate several times then [illegible] nickel — Run those dyes at times Change [illegible] see if [illegible] —

Manipulate the 26° —

Take 4 Cups from 33°/o down stairs [illegible] washing — dry — then [illegible] Rag see how they run —

Make a die & make some narrow cups ~~[illegible]~~ 3/0 to grid —

Try in place Ni Cobalt Nitrite + use with rouleaux K Nitrite in the 21°/o

Try 200 Mtly al with 2 grammes Cobalt Hydrate acetate to with K well not take al from CO OH, but goes down when it is precipitating —

Try 200 Mtly al fresh 2 grammes Acetate Soda and K OH —

Make some Cobalt by H + use 8°/o Hq

Try ROH 21°/o containing 2 grms Mtly — + use iron pocket organ at [illegible] see if more iron goes over with the Mtly

Groups Ni Reg recovering change
fully – take out and boil KOH 5 [illegible]
days & evaporate same pressure in of
pots –

There may be big thing here
also most important [illegible]

ditto Use of Use of [illegible]

ditto, increase correctly pressure to
150 atmos work results –

all the things [illegible] [illegible]
& work [illegible]

Can [illegible] to [illegible]
to [illegible] & then [illegible]
[illegible] to desalize it –

Try 150 [illegible]
150 Con on group of Thy Thin
Cups & group .005 Cups –
also [illegible] of
the [illegible] present groups
now not do use Reg or Reversing
Cups

Cup with [illegible] till dies
Come together [illegible] times in CP
Ni Ally – [illegible] (Neamino)

Reg change fully & [illegible], then
change again [illegible] KOH
& dipped Neamino 3 or 4 times &
drying between each when small in
KOH,

ditto same & then recrystalize
& dip 3 times again –

ditto new cups not dipped but has
multiple cups

Evaporate down some Neamino
see how close it can be made,

Change ratio in 33% then
[illegible] water, get KOH all out then
treat Neamino 2 or 3 times

Charcoal in 33 Soak for 24 hrs.
Rebuoyancy - & Run Reg -

also as above but after Cooling & drying & decomposition
Test in 33 [illegible]
[illegible] Reg -

Group [illegible] of [illegible]
Mamma 3 times,

Acheson Gravitation
10 mesh [illegible]
[illegible]
Mammas [illegible] Reg -

Also some of decomposed
Silicabide. 1st test & for Silica

See how powers the big block is -

Write Acheson see if can
[illegible] Charcoal
also [illegible] for all kinds [illegible]

Group Charcoal [illegible] 33
[illegible]
[illegible]

Group [illegible]
[illegible] Mamma -

13 Press made with 180 mesh
[illegible] 200 [illegible] charges
[illegible]
[illegible] & Run with 2 Reg
[illegible] -

[illegible] so as to try that & [illegible]
[illegible] mat. Try [illegible] grain, get
[illegible] dry, take into powder
with pestle, weight & put in new
Cups 100 smooth 150 coming

Try platinum onto a strip
from [illegible] some.
Meanwhile, up to and [illegible] that
is real process. May need power
platinum —

Group [illegible] [illegible] sides linear
then the [illegible] [illegible] cell reversed
Change then [illegible] & [illegible] Reg
then Rev [illegible] & [illegible] Reg
& so on [illegible] can make it
go back [illegible] & Reg —

Group ~~[illegible]~~ N1 put in [illegible]
Cups no [illegible] Reg process
& Cups 150 & 150 C —

Group 150 & 150 C with
250 [illegible] Chlorine —

Group [illegible] then get pure KOH
dry & dep in [illegible] & [illegible]
put in bottle for [illegible] hours
~~[illegible]~~ for [illegible] the time [illegible]
some N1 & then dry — & Run Reg

Group Gibbs, get [illegible] KOH, buy
then powder & put in new pockets
Reg process

Cups 150 & 150 C

Make much of graphite powder also dropper & plant group of Cupes & try then mix mix [illegible] Ni want oxidize to [illegible] [illegible] graphite Cu oxid prevents

Try a green also, with graphite painted cups [illegible] in 30% [illegible] Ni dep 30 hours [illegible]

Try Group with 3 [illegible] Nitrate & [illegible]

Try with 300 [illegible] [illegible]

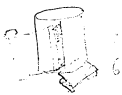
dep 0.05 [illegible]

Raise portion of Crystals Hg in [illegible] dropper in solution to Coverings —

Group 2 mix Aluminum powder in mix of each cup —

Let depositing [illegible] mixture solution along on strips. See which way it goes, deps small [illegible]

Rubber [illegible] on Ni plated Cu



Condensing [illegible]

Expt 9 wait to sulphurize the
surface of Nickel by S & heat,
(10) pocket, & then put KOH,
see if attacks — also of Condensor

Chg + see then chg Soak
left all Sunday by Chem
KOH none, then discharge
& change & finally rinse
Reversed pole water,
take out look more see
if all broken up —

[illegible] Chem Soc Jrnl
550 — products electrolysis
Graphite KOH, [illegible]
[illegible]
Solution [illegible] a
[illegible] Carbon
pp Calcium Nitrate

$C_{12}Ca_2O_{12}$ also the filtrate after
neutralizing of the KOH yields pp
with Ba Nitrate, on Centrifuging turn into
Sodium Salt then into Lead Salt
& decompose the latter with H_2S
in acid liquid solution
which what neutralizes latter
yields Crystals Ammonium pyromellitate
when crystal hydrometer
say the molecular lost not little weight
added Carbon in presence by [illegible]
at 110° of Iron —

Set up a pair of Cups
& use 300 Milligr Cupes
filled with graphite [illegible]
powder [illegible] from
Centrifuging & [illegible] Pure
test and wash [illegible]
(ice) — and 2 weeks
Open & Examine Cupes
also weight [illegible]

Fully chg + dis a reg thin
Chg + [illegible]
off spots in water see if it
blackens and [illegible]
[illegible] not [illegible]
[illegible] to see grey
[illegible] Strong [illegible]
see [illegible]

2 groups chg [illegible]
Chg — then free of KCN,
Run + look out for
Chillpar — other
groups — heavy dis
[illegible] rate, look out
for Chillpar [illegible]
[illegible] out —

Make some thinnest
weight green that is possible
make 10/1000 frame from
sheet Ni — soak in 33% 24 hours
in CP Nickel Fresh — ~~[illegible]~~
~~from Metal~~, R 21%
~~today~~ see how thin can make —

With 3 plates [illegible] shape
1.75 grammes in product,

Makes group 3. 2.8 2.4
2.2 2 1.75 [illegible]

Also group with 2.4
allowed dep in Nimine
5 minutes + dry —
also group charged + dis
then chg + get KCN pass
+ run —!

[illegible]
[illegible] through 20 +
gradile as sheet after [illegible]

Also group with [illegible]
200 Chrysoidin thin as general
from mill [illegible]

Lookout [illegible]
[illegible]

[illegible]
[illegible]

Also look [illegible] Mimic
Pelbyth, [illegible]

[illegible]
[illegible] Several Snake Mimic —
[illegible] Magpie [illegible]
[illegible] Mimic,
[illegible]
[illegible]
[illegible] Mimic
Room — for pocket only

ABartoli + G Papasogli
(Gazzetta 13-22-27)
(Gazzetta. 13 = p 37-55)
(Chem Centr 1881-327 328)
Chem Soc - 1882 p 58-406- 850)
(Acad dei Lincei 8 89 1779-80)
(Cimento 8-278 10 204)
(Chem Soc 41 1883 p 592)
Chem Soc 1886 469
Chem Soc 1884 1239-177-
(Bredre. Ann Chem + P C XIV 6)

Find Green ~~Mi~~ group + run in
500 mol ~~Aniline~~ —

Ditto ~~another~~ group in
500 mol ~~Rodet~~ R —

Try Phoba Ne also CO
in 10% KOH, also
NaOH,

Groups of 100 milligrams of following Compounds

~~KS~~ Tetracyl K

Kly-Cu Cly — ~~Ba Cl Kly~~

" ~~Ba Cl~~ — ~~Cu Cl~~ "

" Li Cl — ~~Cu Cl~~ "

" ~~Cu Cl~~ — ~~Ba Cl~~ "

" ~~Cu Cl~~ — ~~Sr Cl~~ "

" ~~Zn Cl~~ — ~~Cu Cl~~ "

" ~~Ba Cl~~ — ~~Cu Cl~~ chlor

" ~~Cu Cl~~

" ~~Cu Cl~~

All above dissolved Cl all mixed dissolved in KOH 21% —

Group 2 grms ~~Melitrate~~ K

Try plating Ni on Hg in Cu ~~[illegible]~~ dish but [illegible] —

probably it will amalgamate

Possibly Ni by H, coated Cont the green particles check enough by warming NH cy & filter and

When get crump and thin pkts ~~of~~ K Try Lyrica series of $Ni(OH)_2$ by the dry process [illegible] by drag from battles.

Look at Curves on Collegiate Vottage & sod cots in green the old rims 2nd run —

Ask Dyer how Gomes patent ever got to Supreme Court

Get from Melite some Melitic acid —

Then put up pump Reg and add 1 gramme of Enchlor — see if goes good,

of the same series as Mellitic
also phthalic acid,
Terephthalic acid,
Benzoic —
Benzoic 1
phth. no 2
~~Terephthalic~~
Terephthalic 4
Hemimellitic a 3
Mellophanic a 4
Unknown 5
Mellitic 6th —

Plate on Magnesium
flakes —
plate on Zn then dissolve
(1st) plate Zn then Ni
then treat acid —
KOH sol for Zn also
sulphate, ZnCl KCl etc —

Mag. then plat in 33
chg's time — also only
chg hot.

Ring up big sheet, Copper
or brass polished plate Zinc
then Ni + strip Collect enough
to make a group 2.56 Ni
bal ni to 3.2 - 200 Corrugated

also by Copper in KOH + Zn the
wire
Try Magnesium in Reg Sul Zn
if doesn't go try in Zn KOH —
then nickel - Try Ni above
very rate see if strip —

Use polished Ni, put in
Nitrate K for 5 sec
anode, then plate 4 minutes
take out wash put in
Nitrate again anode
5 sec + so on anode
dry/ dipper see if
they separate
possibly Zinc forest,

Try paraffin etc on
Zink squares, then plate
see if works OK —

See Hunter about using
Block size of shafts
in hand rest 5 cal zinc
Medium Block —
Everything also standard

Makes slides ordinary
Blower so any hand
in factory drawers of
any kind can be made
in —

3 grms grains charge
against KCy 100 mlg
KOH twice then
put in fresh KOH
run

drills Chg schedule
same KCy 100 mlg
same procedure

Dip with January K —

Prong 3 gm grain charge
5 hours rest 10 chg 5 —
rest 10, chg 5 rest 10
chg 5 total chg 20 hours
then, dendy —

also chg 33% hot 5 hours
rest 10 5 hours chg 5
rest 10 + 20 on till
15 hours in Jan 125 —

Soak old 26 free KOH
dry + recovery 300 at

E 18 — 10 grms KCy
charge against Cu
then pour out sal put
in KOH soak chg
again till no KCy
varied Hour 7½
Charged —

group 2 from no Hg change 24h against
strip in 500 cc KOH 20%
Containing 500 milgms Cyanide Mercury
Open one iron seed & unequivalent —
also change Group Ni 500 cc KOH
Containing 250 milgms Ferrocyanide
K —
Then put Ni & Irons together after
soaking out the HgCy &
Run Reg —

Soak dozlibbs dredgd pkls
till free KOH, dry —
Then take mix out of ~~bag~~ 6 &
weight — then powder & put
in dewpkts, ~~Bag~~ press &
Cor ~~[illegible]~~
200 atmos —

group green ~~[illegible]~~ just as it
is (Coarse) in big bottle
dont crush —

Try with fingers prelim Expt
Covering green with the flakes
Nickel damp —

Paint circles on Copper strip
with Benzene & varnish then
plate Zn & Ni & Eat off see
if varnish permanent,

Squirt green NaOH in Cake
form —

Iron Cr Co Mn are the
ones that form with Cy
a Complex Molecule
Cobalt making as radical
use these in Cathy

Group Reg He 2 milgms
another 5 milgms
another 10 milg Fabricy it
mayby a Catylizer —
ditto green N groups —

Big Magnet over coal Cell
feeding to Coal Rolls
Catch iron —

Feby 28 1945 Cakes to soak in salts
in + Red by H, a after dec out
Stuff of Cake.

Carb Ca Sr Ba Mn Mg Sb,
Zn

Acetate Zinc Sublimes at 190 C
Mix with Non Volatile Subs —
also chl Amm Phth. Acid
Chloride Mn - Carb Mn,
Sulphate ammon Ammonium Oxy
Vol 218 C
Arsenates of Iron Mg Mg -
Bunsen Flam
Asbestos Cooled in Red by H,
Benzoate Subs at 249 - Lumen
Benzoate Magnesium see what it shows
Borates, Ca Mg
Carb Ba strong heat is losing - Sr dits
powder - mixed with Calcium
Gum ment, Nonors Sulphur
Mn mesh stuff with MgO def pozzuolan
also with Volatile

3 of Cobalt ox Ni 1 of amc
OK → 2½ to 1½ 100 mesh
NHCl obtained 62 got very fine
& Grad upflow —

Heat of Combustion

$CoO \cdot H_2O$ 63.4
Co_2O_3 $3H_2O$ 149.3 —0.7
$2 \cdot Co_2O_6H_6O_2H_2O$ fmethoxide of Co_2O_3

NiO_2H_2O 60.84
Ni_2O_3 $3H_2O$ 120.38
$2\ NiO_2H_2O_2H_2O$ — 1.3

~~CoO_2H_2O 63.4 Monoxide hydrate from metal ox 149 — 1.3 ale~~

Co Hydrate, 63.4
Co_2O_3 " 149.3
$2\ Co_2O_6H_6O_2H_2O$ — 0.7 fmethoxide

Ni Hydrate 60.84
Ni_2O_3 " 120.38
$2 - NiO_2H_2O_2H_2O$ — 1.3 oxide from nickel ox to sesquioxide

March 5th 1905
Mix Reg non with
Molasses dry then
Crush to through 20
on 100 - Coat Nickel
flake - graf - Bismuth
etc also no Coat good for
filling

Mch 5 1905

Mix smelting with $NiCO_3$ & flake Ni after flake on day that is oxidized & one dried pt will be reduced & dolomite in the KOH, so a well cover take place in dissolving without swallowing & respect HgO possibly BiO_x

Flakes –
Ni 10% Co 90% alloy flake by Roll
" 20 " 80
30 70 + so on until
Ni 90 – Co 10
Ni flake plated Au Ag Pt, Sulphide also Co_2O_3 only
Try Ni_2O_3 only with Cobalt flake also Ni
Molybdenum –
Powdered Tungsten Bronze for Carbody – no place
Ni flake –

Mch 5 1905

It is advantageous to size the Ni PtH_2 as large as possible say through 15 or 30 but possibly for Carbon reasons may have to go to or 100 the finer powders than ground from reduced the finish Ni powder reduced to 60 crushed over again – The Carbon the particles the less flakes is required to cover it + more porous the Cake will be –

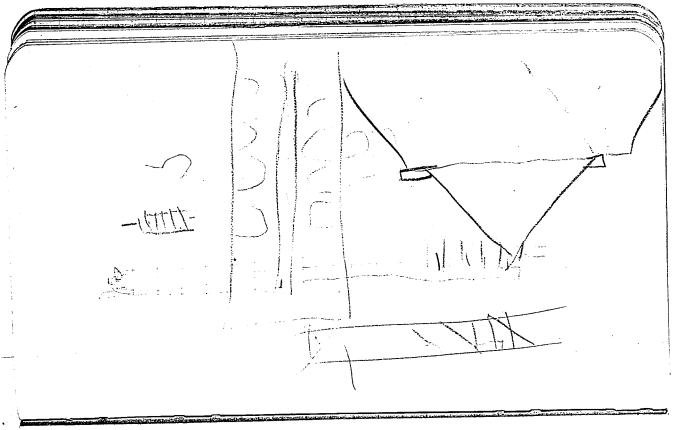
Heat Uranate Na & K see of Carbonat effervescence

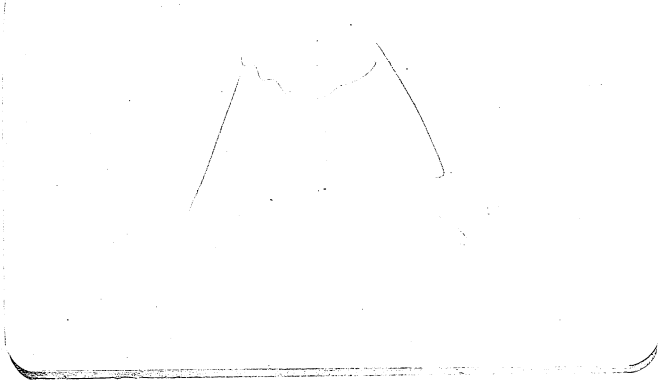
Ni flake Coated Ni_2O_3 only mixed – also $NiCO_3$ pt 1/2 Coated Co_2 & then mix only dried

Look at graphite from Pelham No 26 Cup by Brandmille Lapt.

Mch 5 1905

Change this a pocket
with Metallic flake
put in Mahogany Process
then take out dry &
recorrugate —
also another soaked
10 mm H_2O — dry &
recorrug — see if permanent
swell lessened & if
it will keep so —



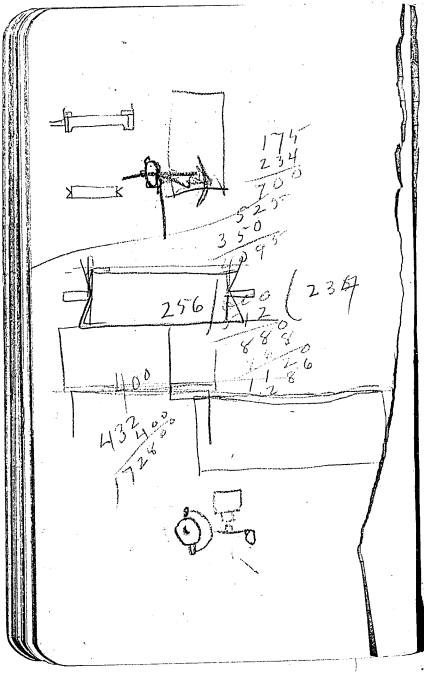


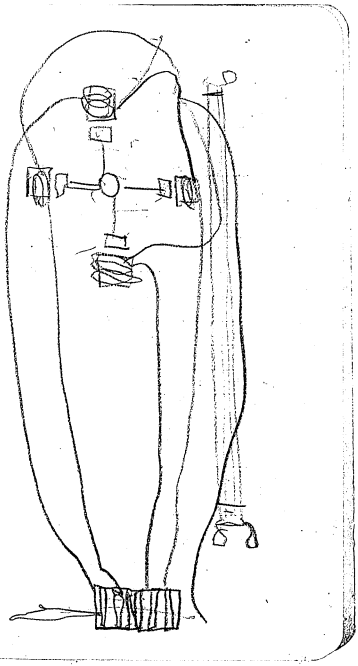
1" ft sqr. $\frac{1}{4}$/1000 thick 1/2 bath size"
2000 drops to get 1 sqr ft 1" thick

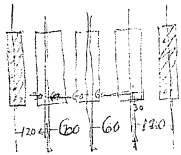
100 plates. 100 drops daily -
is equivalent to 10000 drops -
or 1" sqr ft 5" thick
or 34 2 100 -
745

280
2000 (12
445 / 5600
4450
1150
445) 280000 (-

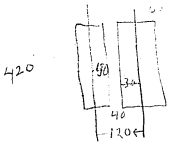
17

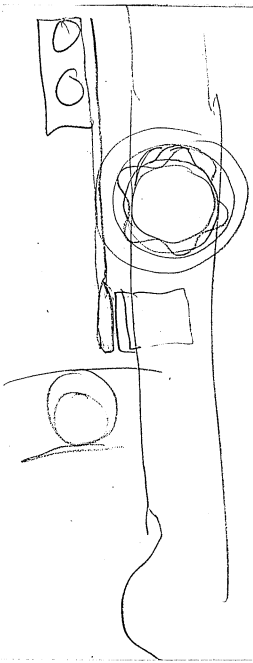

175
234
700
525
350
095
256
2384
1100
432
400
1728




120
60
60
120
30

63
140
140
260


420
90
30
40
120



256-

3 | 512
171

1.075

1.75
3
5
2 | 262

33
80
2641

1.75

100+
3 | 200
66

.5

60-

40
48
88
3
264

4

88
18
704
88
3 | 264

5 1/4 lbs-

28

12
18
76
156
178
24
72

2.55
33
864
864
105

175

1584
756
2340
2340
1872
1872
0

5.24

2.64 | 2340

5 24
4 12
.53

88
12
76
1056
1056
2112
1584
528
528
0

1056

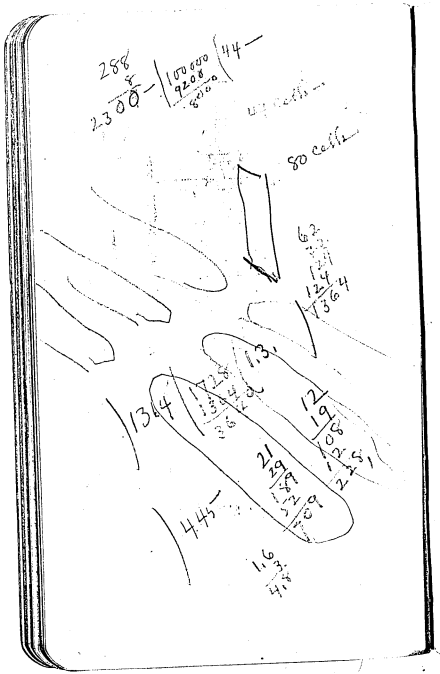
.14.12.88

105-6

.53 26-

440 | 3272
3272
396

40
13
27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80 coeff
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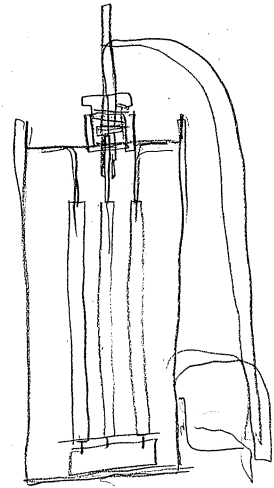

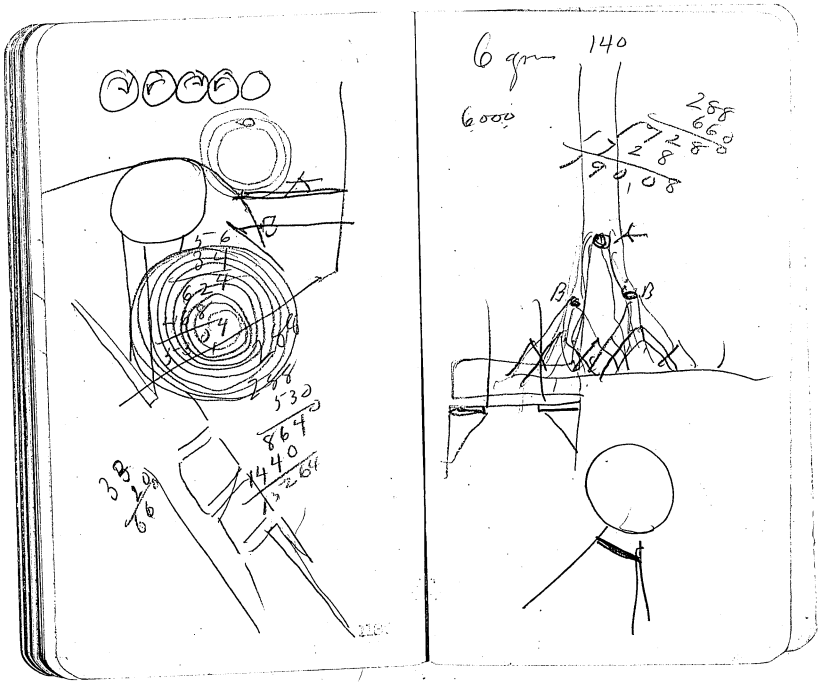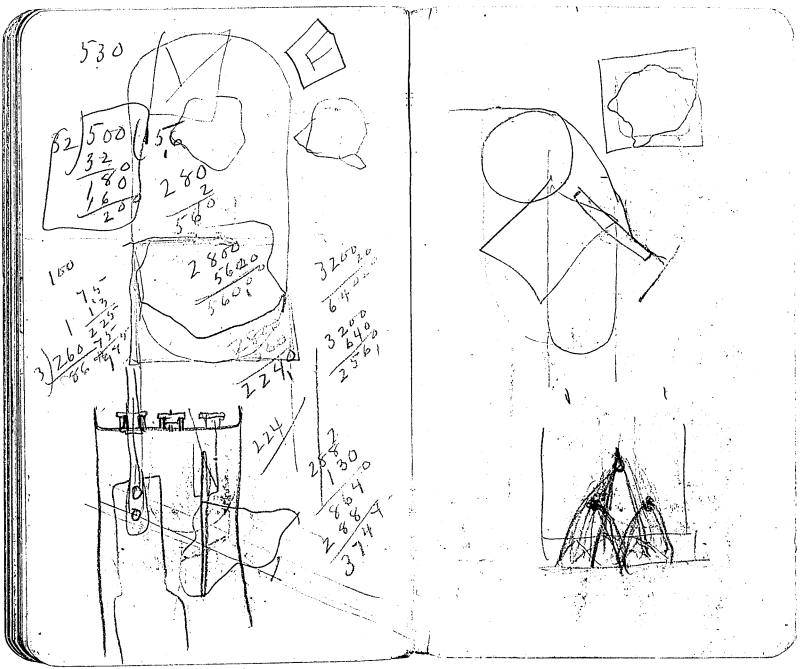
6 gpm
140
6,000
288
660
728
28
9,008
B
B
532
864
1440
1728
38
2
76